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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PRATT, HELEN F

ART UNIT	PAPER NUMBER
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1761

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/487,000

Applicant(s)

BROCKEL ET AL.

Examiner

Helen F. Pratt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4- 19, 21-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-19, 21, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Ooijen (EP 0 608 975 A1) or Gonthier et al. in view of Kotani et al.

Van Ooijen discloses a composition containing an alkaline earth metal hydroxycarboxylate and a carboxylic acid, which can be potassium, magnesium and calcium as in claims 1, 2 and 5 (page 2, lines 20-56 and page 3, lines 1-15). The composition is seen to be a preservative since the claimed chemicals are disclosed and would have inherently had the claimed preservative effects (claim 6). The salts can be added to foods as in claim 16 (page 2, lines 9-20). Gonthier et al. disclose a preservative-type impregnated salt containing like acids and salts which can use a salt of magnesium (col. 1, lines 41-69) in amounts from 0.1 to 100/1 (col. 1, lines 64-73) as in claims 1, 2, 4, 5, 6. Claims 1-2, 5-6, 16 differ from the reference in the particular amount of acid in the product and in the particular particle size. The reference to Van Ooijen discloses 1-90%, preferably 40-60% hydrocarboxylic acid (page 3, lines 16-21). No patentable distinction is seen at this time in the range of 0.5 to 30% absent a showing of unexpected results. Kotani et al. disclose the use of the claimed salts and

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acids as in claims 1, 2, 4-7 (abstract). The salts are disclosed as being within 100 to 200 mesh, which is within the claimed size (and col. 1, lines 58-70, col. 4, lines 5-70). Therefore, it would have been obvious to use amounts within the claimed amounts as shown by van Ooijen and Gonthier and to use the particle size of Kotani et al. in the composition of Ooijen or Gonthier.

Claim 1 has been amended to require that the carboxylic acid is liquid at 40 C. Van Ooijen discloses that a carboxylic acid can be liquid to impregnate solid calcium carboxylate of the hydroxycarboxylic acid. Since claim 1 is a composition claim only the composition needs to be considered and not whether one of the acids is liquid which is a method limitation.

“ The fact that the procedures of the reference are different than that of applicant is not a sufficient reason for allowing the product-by-process claims since the patentability of such claims is based upon the product formed and not the method by which it was produced. See *In re Thorpe* 227 USPQ 964. The burden is upon applicant to submit objective evidence to support their position as to the product-by-process claims. See *Ex parte Jungfer* 18 USPQ 2D 1796.”

Even so, it would have been obvious to use liquid acids in the claimed composition as disclosed by van Ooijen.

Claim 4 requires that the same carboxylic acid and the same carboxylic acid salt is required . The reference to Ooijen discloses using an alkaline earth metal carboxylate of a hydroxycarboxylic acid and another acid, which does not exclude using

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the same salt, which would breakdown to the same acid. Therefore, it would have been obvious to use salts, which give the same acid.

Claims 7 and 14 further require the use of carriers or formulation auxiliaries and agglomerating the mixture. Kotani discloses the use of glycerin, which is seen as a formulation agent (col. 1, lines 55-70). Other agents such as sugar, glycols, oil and sucrose are disclosed (col. 1, lines 55-70). Therefore, it would have been obvious to use known formulation agents in the process of van Ooijen or Gonthier et al.

Claim 14 additionally requires that the powders are agglomerated. Kotani et al. disclose that the sorbic acids are mixed with glycerin or other additives such as glycols, lactic acid, sucrose or oil. It is not seen at this time how the powders could not have been agglomerated because otherwise they would not have stayed together. Therefore, it would have been obvious to mix the double salts with various agents and to agglomerate them.

Claim 8 further requires a protective agent which is soluble or swellable in water at 20C. The glycerin of Kotani et al. is well known to be soluble in water at 20 C. Therefore, it would have been obvious to use glycerin as a protective agent.

Claims 9, 10, and 18 require that various agents can be protective agents. Kotani et al. disclose that lactic acid and propylene glycol or ethylene glycol have been added to the double salts (col. 4, lines 25-45). Therefore, it would have been obvious to add known protective agents to the double salts.

Claim 11 requires dusting powders. The specification discloses that these salts are known and have trade names. It is seen that dusting powders are well known and

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here are used for their known function of keeping materials separate. Therefore, it would have been obvious to use known dusting powders for their known functions.

Claim 12 is to the method of impregnating a carboxylic acid salt with an acid to a particular concentration. Kotani et al. disclose dissolving acids in ethanol and then adding a carboxylic acid salt (col. 2, lines 43-64). As the acid is mixed with the salt, it is seen that it is impregnated. Van Ooijen discloses that the acids can impregnate the carboxylate salt (page 3, lines 10-15). Claim 12 differs as in the composition claim in the particular amount of acid added. The discovery of an optimum value of a result effective variable is ordinarily within the skill of the art. In re Boesch, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). In developing a preservative, properties such as stability and shelf life are important. It appears that the precise ingredients as well as their proportions affect the stability and shelf life of the product, and thus are result effective variables which one of ordinary skill in the art would routinely optimize. Therefore, it would have been obvious to use amounts within the range of the reference for their known function of making an impregnated stable salt especially as the broad range has been shown.

Claim 15 further requires that the preservative is coated with a protective agent which is soluble or swellable in water at 20 C. Nothing is seen that glycerin as disclosed by Kotani is not soluble in water at 20 C. as it is a trihydroxy alcohol. Therefore, it would have been obvious to coat the preservatives with a protective coating such as glycerin as disclosed by Kotani in the process or Van Ooijen or Gonthier.

Claim 17 further requires formulation auxiliaries. Formulation auxiliaries are disclosed as being sucrose, hardened oil, glycerides and glycerin by Kotani et al. Therefore, it would have been obvious to use such to act as formulation auxiliaries as claimed.

Claim 19 further requires the use of a protective agent which is a particular acid and salt. However, the references disclose that it is known to impregnate carboxylic acids with acids in general. Nothing is seen in the specification of using particular acids except in reduction of the smell of the product (Examples). Van Ooijen in particularly discloses the use of salts of acetic and propionic acid. The reference discloses that mixing fumaric acid and an acid salt removes problems of odor and corrosivity (page 2, lines 49-55). Gallic acid is disclosed as one acid, which can be used and is within the claims (page 2, lines 45-49). Kotani et al. disclose using sorbic acid with potassium sorbate and it is disclosed that they have an irritating odor, which is mitigated with glycerin or other additives (col. 1, lines 5-6, 55-70). Gonthier discloses using propionic acid and sodium propionate, (col. 1, lines 56-70. Particular amounts of 1-90% are disclosed by Van Ooijen on page 3, lines 10-15. Therefore, it would have been obvious to make a composition containing the salts and acids as claimed as they are disclosed specifically by Gonthier, and the principles of using the acids with salts disclosed by the other references.

Claim 21 further requires that the preservatives are introduced into or placed on an item to be treated. Van Ooijen discloses that the claimed method masks the unpleasant odors of acids for ensiling. This method must show that that the claimed

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compositions must be placed into the item to be treated, or the grains could not be ensiled (abstract). Gonthier discloses that fish are contacted with ice containing the salts (abstract). Therefore, it would have been obvious to introduce the preservative into the item to be treated.

Claims 23-25 further require various amounts of active substance from 68-75%. The specification discloses that the amounts are based on the total amount of carboxylic acids present in the salt and added" (page 3, lines 10-20). However, van Ooijen discloses that the salt can be impregnated with 1-90% of the carboxylic acid based on the total weight of the alkaline earth metal salt of the hydroxycarboxylic acid (page 3, lines 16-23). The preferable amount is from 40-60%. Nothing has been shown that there is any patentable distinction between 60% and 68% carboxylic acid. In addition, the reference discloses that impregnated salts can be used in a range that encompasses applicants' range. Therefore, it would have been obvious to choose a range which is close to the claimed range as shown by van Ooijen.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over van Ooijen (GB 0608975A) in view of Kotani et al. as applied to the claims above, and further in view of Gonthier et al.

Claim 22 requires that the impregnated salts as in claim 1 contain a carboxylic acid salt, which is formic, acetic or propionic acid, which is impregnated with any of the above carboxylic acids. Gonthier et al. disclose that it is known to combine organic acids and their salts, in particularly, propionic acid with sodium propionate (col. 1, lines 45-64). Even though the combinations of acids and salts are not solid as in a salt they

contain the claimed ingredients. It would have been within the skill of the ordinary worker to use enough of the acids and salts to make a solid or liquid composition, because van Ooijen et al., disclose such (page 2, lines 5-15). Kotani also discloses carboxylic acids and salts (col. 1, lines 3-15). Therefore, it would have been obvious to use particular carboxylic acids and salts as disclosed by Gauthier in place of the carboxylic salts of van Oaken et al. in view of Koran because Gonthier discloses the particular use of certain carboxylic salts as preservatives.

ARGUMENTS

Applicant's arguments filed 5-10-05 have been fully considered but they are not persuasive. Applicants argue that their composition is a solid which has good storage, flow and processing properties. Applicants argue that van Ooijen teaches a liquid composition of a mixture of acids. This is not seen because van Ooijen teaches that "if the aliphatic carboxylic acid is a liquid, this liquid can be used to impregnate the solid calcium carboxylate of the hydroxycarboxylic acid" (page 3, lines 10-15). Also, the mixture can be in "the form of a powder or granules" (page 3, lines 20-23). As to Gonthier, the reference discloses that "the active mixture according to the invention is intended to be incorporated in the ice used for fish storing, it is advantageous to use 0.5 to 10 g. of mixture per liter of ice" (col. 2, lines 9-13). Grams of the mixture is not a liquid measurement. This composition is to be mixed with water at some point just as applicant's composition is. As to the use of buffers, at the beginning of Ex. 1, the reference says that "2 grams per liter of a mixture..... ". The composition is not a liquid

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until the 2 grams have been mixed with the liter of water. Also, as said above, the limitation that the acid is a liquid is a method limitation in a composition claim and is not given weight as only the composition need to be shown. As to Kotani which is a secondary reference, is used for what it teaches. It is not seen how a product that has a mesh size is a liquid (col. 1, lines 58-70, col. 4, lines 5-70).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen F. Pratt whose telephone number is 571-272-1404. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Milton Cano, can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hp 6-11-05

H Pratt
HELEN PRATT
PRIMARY EXAMINER